"APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065520019-1 CIA-RDP86-00513R002065520019-1"

ZUBKOV, V.I.; MONOSOV, Ya.A.

Amplification of microwave oscillations having a frequency higher than the pumping frequency by means of ferrites; theory.

Radiotekh. i elektron 7 no.7:1140-1151 '62. (MIRA 15:6)

(Microwaves) (Ferrites)

BA

ACCESSION NR: AP4033130

5/0120/64/000/002/0127/0128

AUTHOR: Zubkov, V. I.

TITLE: Mass-spectrometer range switch

SOURCE: Pribory* i tekhnika eksperimenta, no. 2, 1964, 127-128

TOPIC TAGS: spectrometer, mass spectrometer, mass spectrometry

ABSTRACT: A new device which permits the automatic changing of magnetic-field subranges during the course of an experiment extending over more than one subrange is described. The device consists of two ShI-11 step-by-step switches, seven tumbler switches for selecting the specific subranges for the upcoming experiment, an SD-2 motor, a push switch, a rectifier, and indicating neon tubes. A simplified circuit diagram is explained in the article. "The author wishes to thank M. V. Tikhomirov for his attention and discussion of the work, and also A. M. Ivanov for his help in building the device." Orig. 2rt. has: 2 figures.

ASSOCIATION: none

SUBMITTED: 28Aug62

DATE ACQ: 11May64

ENCL: 00

SUB CODE: PH

NO REF SOV: 000

OTHER: 000

Card 1/1

"APPROVED FOR RELEASE: Thursday, September 26, 2002 APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065520019-1"

ZUBKGV, V.I.

Device for automatic switching of a mage specification, inth, i tekh. eksp. 9 no.2.127-128 Mr.Ap.164. (MIE: 17:5)

1,0943

9,25/2-1 S/109/62/007/007/011/018 D271/D308

AUTHORS:

Zubkov, V. I. and Monosov, Ya. A.

TITLE:

Amplification of UHF oscillations whose frequency is higher than the pumping frequency using ferrites

(Theory)

PERIODICAL:

Radiotekhnika i elektronika, v. 7, no. 7, 1962,

1140-1151

TEXT: Parametric excitation in ferrites is analyzed, with emphasis on higher than pumping frequencies; the pumping field is parallel to the magnetizing field; new possibilities of amplification and of converting lower frequencies into higher than pumping frequencies are investigated. A spherical ferrite body is magnetized along its Oz axis, and the magnetic field at pumping frequency ω_0 is linearly polarized along the same axis. Fundamental field equations lead to

polarized along the same axis. Fundamental field equations lead to an infinite system of differential equations for magnetostatic potentials; these are solved using Legendre functions and a system

Card 1/3

Amplification of UHF ...

S/109/62/007/007/011/018 D271/D308

of equations is obtained which describes a parametrically coupled oscillating system with an infinite number of degrees of freedom. An equivalent system of RLC circuits is given. The threshold of parametric excitation and the tuning conditions are obtained from the above equations taking into account ferrite losses. The relationship between the threshold level and tuning conditions is discussed and it is concluded that higher than pumping frequencies cannot be separated from self-oscillations, unless auxiliary circuits are used, e.g. based on selective properties of the resonator in which the ferrite is placed. Amplification of below-pumping frequencies, conversion of below-pumping to above-pumping frequencies and amplification of above-pumping frequencies are compared and it is found that the effect decreases in the above order. The possibility of conversion to higher than pumping frequencies, making use of resonator selectivity, is analytically investigated and it is shown that the conversion factor is generally much smaller than the amplification coefficient although a judicious choice of parameters permits a lossless conversion. The frequency of particular interest is the lowest of the possible frequencies which Card 2/3

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APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002005520019-1*

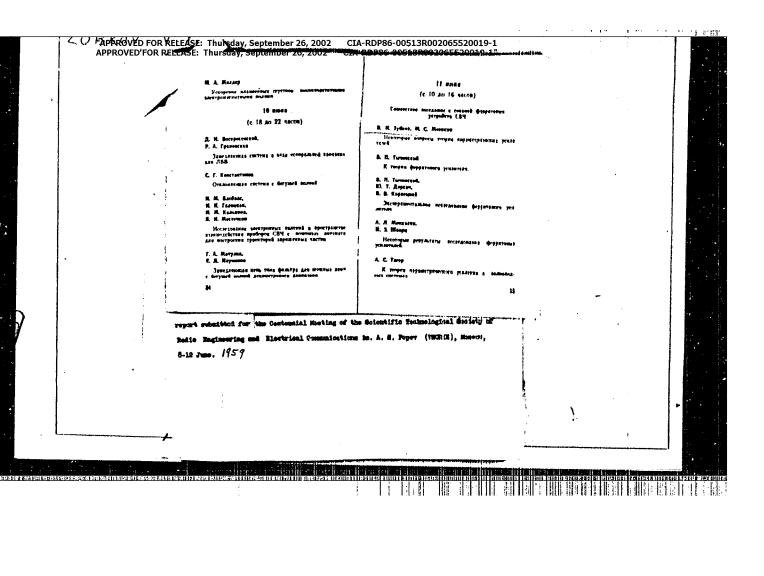
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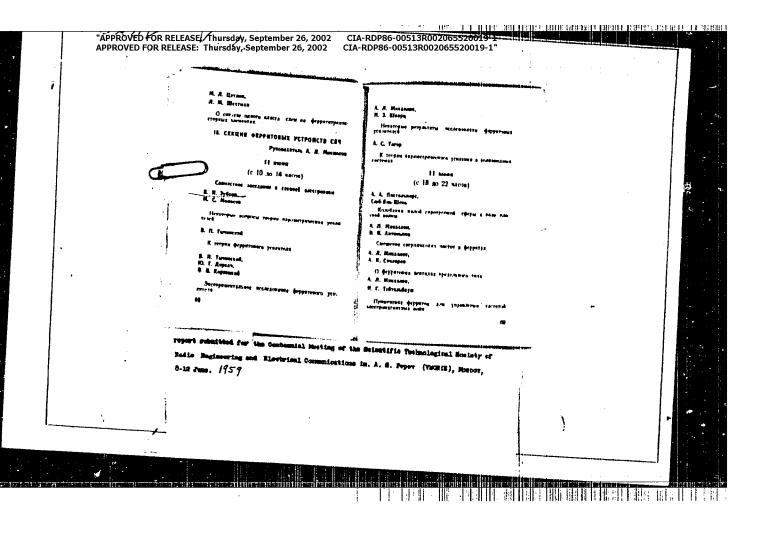
"APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065520019-1 APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065520019-1"

ZUPKOV, V.I.; TIKHOMIROV, M.V.; ANDRIANOV, K.A., akademik; GOLUBTSOV, S.A.

Mass spectrometric study of intermediate products of the reaction of silicon with copper monochloride. Dokl. AN SSSR 159 no.3: 599-601 N '64 (MIRA 18:1)

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"APPROVED FOR RELEASE: Thursday, September 26, 2002

CIA-RDP86-00513R002065520019-1"

Contribution to the theory of parametric dystems with periodically elektron. 11 no.1:103-110 Ja 166.

1. Submitted September 24, 1964.

9.2590

771.94 807/109-5-1-7/20

AUTHORS:

Zubkov, V. I., Monosov, Ya. A.

TITLE:

Some Problems in the Theory of Parametric Amplifiers

PERIODICAL:

Radiotekhnika i elektronika, 1960, Vol 5, Nr 1, pp 75-

89 (US\$R)

ABSTRACT:

In the study, the natural frequencies (frequencies of parametric coupling) and resonance curves of parametrically coupled circuits are investigated. (1) Oscillations in parametrically connected systems. The system shown in Fig. 1a is under discussion. Circuits 1, 2, and 3 are named signal, auxiliary, and boosting circuits, respectively, just as in Reference (4) of this abstract. Let ω_1 be the frequency of ω_2^\dagger be the frequency of emf in the the generator, auxiliary circuit, and let ω_{3} be the frequency of the pumping generator. Then, the following set of equations holds:

Card 1/16

Some Problems in the Theory of Parametric Amplifiers

$$\begin{split} V_{4} &= I_{1} \left(R_{1} + j X_{1} \right) - j \omega_{1}^{\prime} L_{0} I_{3} I_{2}^{\prime}, \\ V_{2} &= I_{2} \left(R_{2} + j X_{2} \right) - j \omega_{2}^{\prime} L_{0} I_{3} I_{1}^{\prime}, \\ V_{3} &= I_{3} \left(R_{3} + j X_{3} \right) - j \omega_{3} L_{0} I_{1} I_{4}, \end{split}$$

$$(1)$$

where $L_{\rm o}$ is the nonlinear inductance; $R_{\rm i}$, $L_{\rm i}$, $C_{\rm i}$ will represent sums of all linear parameters of the corresponding circuit. Equations (1) hold under the assumptions that:

$$\omega_1 + \omega_2 = \omega_3. \tag{2}$$

and that for ω_1^i and ω_2^i no multiple ratio exists. Assuming that $\mathbf{I}_3\gg\mathbf{I}_1$ and $\mathbf{I}_3\gg\mathbf{I}_2$, the following set of equations is given:

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Some Problems in the Theory of Parametric Ampliflers

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$$V_{1} = I_{1}(R_{1} + jX_{1}) \cdots j\omega_{1}^{*}L_{0}I_{3}I_{2}^{*},$$

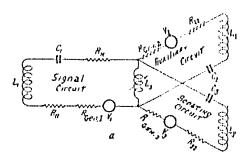
$$V_{2} = I_{2}(R_{2} + jX_{2}) \cdots j\omega_{2}L_{0}I_{3}I_{1}^{*},$$
(3)

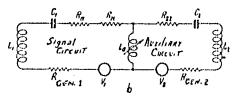
This system of equations is linear with respect to currents \mathbf{I}_1 and \mathbf{I}_2 . Figure 1b shows the equivalent diagram of the system described by Eqs. (3). Inductance coupling these circuits changes periodically with frequency ω_3 . The system of Eqs. (3) is similar to equations for currents in ordinary coupled circuits if $\mathbf{L}_0 = |\mathbf{I}_3|$ is taken as coupling inductance. In the absence of parametric coupling the natural frequencies of circuits are called "partial frequencies" and are denoted by ω_1 . In the presence of the parametric coupling, they are called "frequencies of parametric coupling," and are denoted as $\omega_{\pm e}$. (a) Frequencies of parametric coupling, "and are denoted as $\omega_{\pm e}$. (a) Frequencies of parametric coupling. In order to determine the

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Some Problems in the Theory of Parametric Amplifiers

77194 80V/109-5-1-7/20





Card 4/16

Fig. 1. Equivalent diagrams for the three-circuit (a) and two-circuit (b) parametric amplifiers.

"APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065520019-1 CIA-RDP86-00513R002065520019-1"

Some Problems in the Theory of Parametric Amplifiers

77194 80V/109-5-1-7/20

frequencies of parametric coupling the determinant of Eq. (3) taken with respect to the unknowns \mathbf{I}_1 and \mathbf{I}_2

is equaled to zero. Assuming that the paremetric coupling is small and that its frequencies differ little from the partial frequencies, the following equations for the frequencies of the parametric coupling are obtained:

$$\begin{array}{c}
\omega_{10} = \frac{\omega_{3} + \omega_{1} - \omega_{2}}{2} + \frac{1}{2} V \overline{(\omega_{3} - \omega_{1} - \omega_{2})^{2} - k^{2} \omega_{1} \omega_{2}} \\
\vdots \\
\omega_{10} = \frac{\omega_{3} + \omega_{1} + \omega_{2}}{2} + \frac{1}{2} V \overline{(\omega_{3} - \omega_{1} - \omega_{2})^{2} - k^{2} \omega_{1} \omega_{2}}
\end{array}$$
(9)

where

$$k^2 = \frac{I_0^2 |I_3|^2}{I_0 L_2}.$$

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Some Problems in the Theory of Parametric Amplifiers

For the particular case when $\omega_1 + \omega_2 = \omega_3$ Eqs. (9) are transformed into:

$$\frac{\omega_{10} = \omega_1 \pm f_{\frac{1}{2}}^k V \omega_1 \omega_2}{\omega_{10} = \omega_2 \pm f_{\frac{1}{2}}^k V \omega_1 \omega_2}$$
(10)

The general case is discussed when the sum $\omega_1+\omega_2$ differs from ω_3 , but is sufficiently near ω_3 . The following definitions are introduced: The difference between the boosting frequency and the sum of the partial frequencies is called "the absolute tuning out," and the quantity:

$$\frac{9}{1912} = \frac{9}{2} \cdot \frac{\omega_3 - (\omega_1 + \omega_1)}{\omega_{1,3}}$$

Card 6/16

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Some Problems in the Theory of Fernsetzie Ampliflers

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is called "the relative tening out." Programmer of the parametric coupling calculated on the bulks of Eq. (9) are shown in Fig. ., as function of retaining the signal circuit. ω_1 by the pusping constant

frequencies and through auxiliary circuits. On the supplementary absolute axis, relative tuning out is marked, and on the supplementary ordinate axis, detuning is shown. The parametric coupling shown in Fig. 2 is constant. When the tening out decreases, the frequencies of parametric coupling are displaced with respect to the partial frequencies. The maximum difference between the coupling and the partial frequencies takes place at condition:

$$(\omega_1 \cdots \omega_1 \cdots \omega_2)_{presenced} = \mathcal{R}_{IDef - NCLD} Y \omega_1 \omega_2, \tag{11}$$

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"APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065520019-1 CIA-RDP86-00513R002065520019-1"

Some Problems in the Theory of Parametric Amplifiers

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Fig. 2. Frequencies of parametric coupling as functions of natural frequency of the stead circuit. Parameter values: k = 0.03); ω_3 / ω_2 = 1.5.

Caption for Fig. 2.

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Some Problems in the Theory of Parametrie Amplifiers

77194 SOV/109-5-1-7/20

The tuning out and the coupling satisfying Eq. (11) are called threshold tuning out and threshold coupling. (b) Resonance curves of the signal circuit. The resonance curves of currents in the parametrically coupled circuits are discussed. The set of Eqs. (3) is solved on the assumption that $V_2=0$. Two cases are discussed: In the first case, the analysis is made for the condition represented by Eq. (2). In the second case, an analysis is made for the general condition $\omega_1+\omega_2\simeq\omega_3$. Figures 3 and 4 give plots of current in the signal circuit as function of retuning frequency of the generator with respect to frequency of the circuit 1. (c) Resonance curves of the auxiliary circuit. The method of analysis is similar to that shown under (b). Two cases are also discussed: In the first case, the sum of the partial frequencies is equal to the purple; frequency ($\omega_1+\omega_2\simeq\omega_3$): In the second case, the left of the partial frequencies differs from the pumping frequency ($\omega_1+\omega_2\simeq\omega_3$). Two resonance curves

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"APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065520019-1 APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065520019-1

Some Problems in the Theory of Parameters $\operatorname{Amplifters}$

77194 30V/109-5-1-7/20

Fig. 3. Current reconance curves in the signal circuit at a tening out greater than the threshold value. The values of parameters: k=0.039; $\beta_2=0.095$; $\alpha_2=0.6$; (1) $\alpha_1=\alpha_2=0.001$; (2) $\alpha_1=\alpha_2=0.005$; (3) $\alpha_1=\alpha_2=0.01$; (4) $\alpha_1=0.05$; $\alpha_2=0.03$; (the dotted line is plotted for the nonregenerated circuit k=0; k=0;

Caption for Pigure 3.

similar to Fig. 3 and 4 are given. (2) Resistance Introduced Into the Third Circuit. In order to examine the back effect of the signal and of the auxiliary circuits on the boosting circuit, the magnitudes \mathbf{I}_1 and \mathbf{I}_2 , as determined by Eqs. (3), are introduced into the equation of the pumping circuit of the system (1). After some transformations the following expression for the resistance carried in the third circuit is obtained:

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"APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065520019-1 CIA-RDP86-00513R002065520019-1"

Some Problems in the Theory of Parametric Amplifiers

77194 307/109**-**5-1-7/20

$$Z = \frac{\omega_3 L_0^2 (\|V_1\|^2 (R_2 + jX_2) |w_2| + \|V_2\|^2 (R_1 + jX_3) \omega_1') I_0}{(R_1^2 + X_1^2) (R_2^2 + X_2^2) + 2(R_1 R_2 + X_1 V_3) \omega_1 \omega_3 L_0^2 (I_3 \|V_1 + \omega_1' \omega_1^2 L_0^2 I_3)^4}.$$
 (33)

The parametric regeneration of the oscillations in the signal and in the auxiliary circuits is possible only at the expense of the damping carried in the third circuit. The maximum magnitude of the active resistance of the third circuit is discussed. In conclusion the author says the following: In the study are calculated curves of the parametric coupling frequencies as function of retuning of the partial frequency of one of the circuits. It is shown that in the region of the tunings out, which satisfy the cendition:

$$\omega_3 - \omega_1 - \omega_1 \leqslant k \sqrt{\omega_1 \omega_{11}}$$

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"APPROVED FOR RELEASE: Thursday, September 26, 2002 APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065520019-1 CIA-RDP86-00513R002065520019-1"

Some Problems in the Theory of Parametric Amplifiers

77194 SOV/109-5-1-7/20

A parametric excitation of oscillations in coupled circuits takes place. Inside this region frequencies of the parametric coupling coincide with the partial frequencies. On the boundaries of this region there is the greatest displacement between the parametric coupling frequencies and the partial frequencies. tuning out of the sum of the partial frequencies from the tuning frequency, the effect of parametric excitation decreases, and even vanishes. This splits the current resonance curves of the circuits, causing a sufficiently small attenuation. The complex resistance carried in the pumping circuit was calculated. When the coupling reaches the threshold magnitude (i.e., the pumping amplitude equals the threshold magnitude), then the active resistance carried in the pumping circuit increases sharply. This leads to the increase In total attenuation, which takes place in the region of the frequencies that satisfy the equation:

Card 15/16

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"APPROVED FOR RELEASE: Thursday, September 20, 2002 CIA-RDP86-00513R002 Some Problems in the Theory of Parametric Amplifiers

77194 SOV/109-5-1-7/20

 $\frac{X_1}{R_1} = \frac{X_2}{R_1} \approx 0,$

Assistance of A. A. Pistol'kors and A. L. Mikaelyan is acknowledged. There are 6 figures; and 8 references, 3 Soviet, 5 U.S. The U.S. references are: H. Suhl, Proposal for a Ferromagnetic Amplifier in the Microwave Range, Phys. Rev., 1957, 105, 2, 384; H. Suhl, Theory of the Ferromagnetic Amplifier, J. Appl. Phys., 1957, 28, 11, 1225; M. T. Weiss, A Solid-State Microwave Amplifier and Oscillator Using Ferrites, Phys. Rev., 1957, 107, 1,317; S. Bloom, K. K. N. Chang, Theory of Parametric Amplification Using Nonlinear Reactances, RCA Rev., 1957, 18, 4, 578; H. Heffner, G. Wade, Gain, Bandwidth and Noise Characteristic of the Variable-Parameter Amplifier, J. Appl. Phys., 1958, 29, 9, 1321.

SUBMITTED: Card 16/16

June 13, 1959

"APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065520019-1 CIA-RDP86-00513R002065520019-1"

ZUBKOV, V.I.

Sublimation of solid halls in a gas flow. Dokl.AN SSER 123 no.5:803-805 D '58. (MIRA 12:1)

1. Odesskiy gosudarstvennyy universitet imeni I.I. Mechnikova. Predstavleno akademikom V.V. Shuleykinym.
(Sublimation (Physical sciences))

"APPROVED FOR RELEASE: Thursday, September 26, 2002

ZUEKOV, V. 1.

"Albino Sirda," Priroda, No. 10, 1949.

"APPROVED FOR RELEASE: Thursday, September 26, 2002 APPROVED FOR RELEASE: Thursday, September 26, 2002

CIA-RDP86-00513R002065520019-1 CIA-RDP86-00513R002065520019-1"

SOURCE CODE: UR/0069/66/028/004/0573/0579

ACC NA: AP7003498

AUTHOR: Todes, O. M. Pedoseyev, V. A.; Zubkov, V. I.

ORG: Odessa University im. I. I. Mechnikov (Odesskiy universitet)

TITLE: Calculation of the rate of vaporization and growth of a drop (spherule)

with allowance for variation in its temperature

SOURCE: Kolloidnyy zhurnal, v. 28, no. 4, 1966, 573-579

TOPIC TAGS: vaporization, vapor

ABSTRACT: In calculating the rate of vaporization of a drop, allowance has to be made for the fact that the concentration of saturated vapor at the surface of the drop corresponds to the surface temperature rather than the given temperature of the surrounding environment. Since the saturated vapor concentration is exponentially dependent on the temperature, the calculation of the surface temperature and the rate of vaporization requires the preliminary solution of a complex transcendental equation. The present article shows that, given certain simplifying assumptions and the introduction of several dimensionless parameters, this problem can be reduced to a universal equation whose solution can be tabulated or represented in the

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"APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065520019-1" CIA-RDP86-00513R002065520019-1"

ACC NR: AP7003498

form of a graph or nomogram. The same equation should also describe the process of drop growth in air and the process of vaporization or growth of a sublimable solid spherule. The vaporization and growth of a drop are considered both in the absence and in the presence of convection. In the first approximation the temperature drop between particle and flow is found to be independent of the rate of air-cooling. This conclusion and the calculated dependences were verified experimentally by measuring the rate of vaporization and cooling of vaporizing spherules and liquid drops of naphthalene. Orig. art. has: 4 figures, 18 formulas and 1 table.

SUB CODE: 20 / SUBM DATE: 29Mar65 / ORIG REF: 003

Card 2/2

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065520019-1

ZUBLO7, V.L.

Some data on the regional change in the velocity of the propagation of elastic waves in the deposits of sedimentary cover in Tatarstvin. Lov. Lazan fill AN 3016. Mer. 1801. Enak to 10:271-95

Results of studying the velocity of the propagation of elastic waves in the rocks of crystalline basement in the Tatar A.S.S.R.

1014.:96-101 (MIRA 18:6)

AUTHORS: Krinari, A. I. and Zubkov, V. L.

49-6-15/21

On the characteristic of elastic properties of paleozoic rocks of Tataria. (K kharakteristike uprugikh svoystv gornykh porod paleozoya Tatarii).

PERIODICAL: "Izvestiya Akademii Nauk, Seriya Geofizicheskaya" (Bulletin of the Ac.Sc., Geophysics Series), 1957, No.6, pp. 813-817 (U.S.S.R.)

ABSTRACT: Extensive seismic prospecting is being carried out in Reliable geological interpretation of the results Tataria. cannot be obtained without knowing the elastic properties of the rocks of which the investigated region consists. Therefore, the Geological Institute of the Kazan Branch of the Ac.Sc. (Geologicheskiy Institut Kazanskogo Filiala AN SSSR), in cooperation with the Kazan team of the Tatneftegeofizika Trust, carried out laboratory investigations of the elasticity of rock specimens taken from drilling cores of wells and from natural formations in Eastern Tataria. About 600 specimens encompassing the entire paleozoic section and all the lithological components of its rocks have been investigated. Ozerskaya, M.L. (1) and Tarkhov, A.G. (2) established that the rebounce coefficient and the Young modulus are closely inter-related

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"APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065520019-1 APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065520019-1"

49-6-15/21

On the characteristic of elastic properties of paleozoic rocks of Tataria. (Cont.)

changes along the section of the region and to reveal certain general relations between the equivalent elasticity, the composition, the growth formation and certain features of the sediments. The obtained data will help to interpret correctly the results of seismic measurements.

There are 3 figures and 2 tables and 2 Slavic references.

SUBMITTED: November 9, 1956.

ASSOCIATION: Kazan Branch of the Ac.Sc. Geological Institute. (Kazanskiy Filial Akademii Nauk SSSR Geologicheskiy Institut).

AVAILABLE: Library of Congress Card 3/3

"APPROVED FOR RELEASE: Thursday, September 26, 2002 APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065520019-1 CIA-RDP86-00513R002065520019-1"

ZUBKO, V.M.; LIVSHITS, M.N.

Furniture industry of the Ukraine on the fortieth anniversary of the October Revolution. Der. prom. 6 no.11:11-13 H *57. (MIRA 10:11)

1. Gosplan USSR.

(Ukraine--Furniture industry)

"APPROVED FOR RELEASE: Thursday, September 26, 2002 APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065520019-1 CIA-RDP86-00513R002065520019-1

- 1. ZUBKOV, V. M.
- 2. USSR (600)
- 4. Wharves
- 7. Rational method of building the inclined portion of slips, Rech. transp., 12, No. 6, 1952.

9. Monthly List of Russian Accessions, Library of Congress, April, 1953, Uncl.

"APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065520019-1 CIA-RDP86-00513R002065520019-1"

VERESHCHAGIN, L.F.; SEMERCHAN, A.A.; ZUBKOV, V.M.; KUZIN, N.N.

High-pressure and high-temperature apparatus with several pairs of lead-ins. Dokl.AN SSSR 145 no.1:71-72 Jl '62. (MIRA 15:7)

1. Institut fiziki vysokikh davleniy AN SSSR. 2. Chlen-korrespondent AN SSSR (for Vereshchagin).

(High-pressure research-Equipment and supplies)

3896 0 \$/020/62/145/001/009/018 B104/B102

16000

AUTHORS:

Vereshchagin, L. F., Corresponding Member AS USSR, Semerchan, A. A., Zubkov, V. M., and Kunin, N. H.

TITLE:

High-pressure and high-temperature apparatus with several

pairs of electric lead-in wires

Akademiya nauk SSSR. Doklady, v. 145, no. 1, 1962, 71-72 PERIODICAL:

TEXT: Difficulties arising in the current feed to high-pressure apparatus were overcome by the device shown in Fig. 1. Specimen 4 is placed in a cylindrical container inside a high-pressure chamber 5. Two pistons 9 compress the specimen. During compression the pyrophillite seals 2 enter the gaps (~ 0.1 mm) between the four sectors of pistons 9. The current is fed through the piston to the cylindrical graphite or metal container which is used as a furnace. The apparatus was calibrated for pressures of up to 50,000 $\rm kg/cm^2$ by making use of the jumps known to occur in the electric conductivity of Bi and Tl at certain temperatures. There are 3 figures.

Card 1/2

Eigh-pressure and high-temperature...

S/020/62/145/001/009/018 B104/B102

ASSOCIATION:

Institut fiziki vysokikh davleniy Akademii nauk SSSR (Institute of the Physics of High Pressures of the Academy

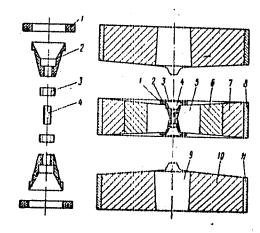
of Sciences USSR)

SUBMITTED:

March 20, 1962

Fig. 1. High-pressure apparatus.

Legend: (1) and (2) pyrophillite seals; (3) ring for pressure transmission; (4) specimen; (5) high-pressure chamber.



Card 2/2

AUTHORS:

SOV/19-58-6-50/685 Samoylyuk, N.D.; Povolotskiy, I.A.; Zubkov, V.N.

and Shchennikov, V.N.

TITLE:

A Scraper Conveyor for Development Combine (Skrebkovyy konveyer dlya nareznykh kombaynov)

PERIODICAL:

Byulleten' izobreteniy, 1958, Nr 6, p 15 (USSR)

ABSTRACT:

Class 5b, 12. Nr 113413 (585162 of 19 September 1957). Submitted to the Committee for Inventions and Discoveries at the Ministers Council of USSR. A scraper conveyor for development mine workings, provided with an extendable chute frame with moveable chutes attached to the end head of the conveyor which is connected by hinges to a sinking com-

Card 1/1

APPROVED FOR RELEASE. Thursday, September 26, 2002

CLA-RDPSC-00513R002065520019-1

Tekhnicheskiy redsektor

[The atruggle to raise labor productivity in the petroleum industry]

[Groznyi] Groznenskoe km-vo. 1955. 48 p. [Microlla] (MIRA 10;2)

(Labor productivity) (Petroleum industry)

"APPROVED FOR RELEASE: Thursday, September 26, 2002 APPROVED FOR RELEASE: Thursday, September 26, 2002

CIA-RDP86-00513R002065520019-1 CIA-RDP86-00513R002065520019-1

ACC NR: AP 7001404

(A, N)

SOURCE CODE: UR/0413/66/000/021/0093/0093

INVENTOR: Zubkov, V. P.

ORG: none

TITLE: A method of casting thin-wall parts. Class 31, No. 187954

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 21, 1966, 93

TOPIC TAGS: thin wall article, thin wall article casting, molten metal, metal

ABSTRACT: This Author Certificate introduces a method of casting thin-wall parts in which the mold is filled with molten metal when submerged in a metal bath, and the excess of metal is squeezed out by closing the half molds. To improve the casting quality and to control the mold filling, the mold is opened below the metal surface at a depth exceeding the height of casting.

SUB CODE: 13/ SUBM DATE: 14Dec64/ ATD PRESS: 5110

Card 1/1

UDC: 621.746.58

"APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-005138002065520019-1

ZAK, P.S.; ZHURAVLEV, V.L.; ROMANOV, V.A., otv.red.; SAIDONOV, N.T., red.; GOTOVTSEV, A.A., red.; GRIMEREG, A.Ya., red.; ZUEKOV, V.T., red.; KOQAN, A.M., red.; NEYMARK, A.M., red.; HEBGUIN, K.K., red.; MAZIMOV, N.M., red.; MEYMARK, A.M., red.; HINDTHIR, R.I., red.; SFEWAK, V.Ya., red.; TEMENBAUM, N.M., red.; SHUKTMER, R.I., red.; ALADOVA, Ye.I., tekhn.red.; SHEMAR, S.Ya., tekhn.red.

[Design and manufacture of globoid gears] Proektirovanis i izgotovlenie globoidnykh peredach. Moskva, Ugletekhizdat, 1958.

37 p. (Tekhnologiia ugol'nogo mashinostroeniia, no.2).

(Gearing)

"APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065520019-1"

ZUKOV, Vasiliy Vasili 'yevich; FETROV, V.F., otv. red.; KACHALKINA, S.Ya., tekhn. red.

[Brief course in general petrography]Kratkii kurs obshchei petrografii. 3 izd., peror. i dop. Moskva, Gosgortekhizdat, (Petrology)

(Petrology)

"APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065520019-1
CHARYGIN, Mikhail Mikhaylovich, prof.; KHAIN, V.Te., prof., doktor geologomineralog.nauk, retsenment: ZUBKOV, V.V.
vedushchiy red.; POLOSINA, A.S., Jerkhiller ad.; PEHSHINA, Ye.G.,

[General geology] Obshchaia geologiia. Izd.2., perer. 1 dop.
1959. 390 p.

(Geology)

(Geology)

ZUPKOV, VappNoveD For RelEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065520019-1
A short course in general petrography; text-book. Moskva, Ugletekhizdat, 1950.

QE431.29

1. Petrology.

ZUMPROVED FOR RELEASE: Thursday, September 26, 2002

CIA-RDP86-00513R002065520019-1

CIA-RDP86-00513R00206520019-1

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CIA-RDP86-00513R002065520019-1

GHARYGIN, Mikhail Mikhaylovich, professor; EURKOV, V.V., kandidat geologomineral'nykh nauk, dotsent, retsenzent; HIZAROV, M.P., redaktor;

PERSHIMA, Ye.G., redaktor; POLOSIMA, A.S., tekhnicheskiy redaktor

[General geology]Obshchaia geologiia. Hoskva, Gos.nauchno-tekhn.
izd-vo neftianoi i gorno-toplivnoi lit-ry, 1956. 392 p.[Microfilm]

(Geology)

(MIRA 9:3)

"APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065520019-1"
ZUHKOV, Ya.S.; MOSKOVKIN, I.V.; EDERL'MAN, Ya.A.; YAKOVLEV, Y.A.

Efficient functioning of bits. Neft. khoz. 41 no. 11:57-59
(Mfra 17:7)

"APPROVED FOR RELEASE: Thursday, September 26, 2002
APPROVED FOR RELEASE: Thursday, September 26, 2002
CIA-RDP86-00513R002065520019-1
CIA-RDP86-00513R002065520019-1

ZUBKOV, Ye.; KHRENOV, M., veterinarnyy vrach

How we use food scraps to fatten swine. Sov. torg. 33 no.7: 24-26 J1 160. (MIRA 13:7)

1. Direktor podsobnogo khozyaystva, Kherson.
(Garbage as feed)
(Swins-Feeding and feeds)

"APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065520019-1"
ZUBKOV, Ye.F.

Remarks on "atmospheric phenomena" and "unusual phenomena".

Meteor. i gidrol. no.4:65-66 Ap '62. (MIRA 15:5)

(Mateorology-Observations)

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"APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065520019-1 CIA-RDP86-00513R002065520019-1"

SHKLYAYEV, A.S., kand.geograf.nauk (Perm'); ZUBKOV, Ye.F., kand.geograf.-

Early spring. Priroda 51 no.4:127-128 Ap *62. (MIRA 15:4)
(Russia, Northern--Spring)

Approved For Release: Thursday, September 26, 2002

Approved For Release: Thursday, September 26, 2002

CIA-RDP86-00513R002065520019-1*

Low many blowout preventers should be used. Neftianik 6 (MIRA 14:12)

1. Glavnyy insh. treata Permnofterasvedka. (Oil wells Equipment and supplies)

"APPROVED FOR RELEASE: Thursday, September 26, 2002

APPROVED FOR RELEASE: Thursday, September 26, 2002

ZUBKOV, Ye.F., kand.geograf.nauk; SKHLYAYEV, A.S., kand.geograf.nauk

Winter in the Kama Valley. Priroda 50 no.12:122 10 '61.

(MIRA 14:12)

1. Permskiy gosudarstvennyy universitet im. A.M.Gor'kogo.

(Kama Valley--Winter)

"APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065520019-1

ZUBKOV, Ye.F. (Perm'); SHKLYAYEV, A.S. (Perm')

In the Kama region. Priroda 51 [i.e. 52] no.5:128 '63.

(Kama region—Spring)

"APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065520019-1 CIA-RDP86-00513R002065520019-1"

ZUBKOV, Yo.F.

Using pin roller bits in fields of the Perm Economic Bagion. Neft. khoz. 40 no.11:66-69 N '62. (MIRA 16:7)

ed II. II. chini nas re la boce de la mose aca a il

(Perm Province-Oil well drilling-Equipment and supplies)

"APPROVED FOR RELEASE: Thursday, Sentember 26, 2002 CTA-RDP86-00513R002065520019-1

"APPROVED FOR RELEASE: Thursday, September 26, 2002
APPROVED FOR RELEASE: Thursday, September 26, 2002

ZUBKOV, Yevteniy Fedorovich

CIA-RDP86-00513R002065520019-1

CIA-RDP86-00513R002065520019-1

[Agricultural climatology of Molotov Province and periods for field work] Agroklimat Molotovskoi oblasti i sroki polevykh rabot. Molotovskoe knizhnoe izd-vo. 1956. 82 p. (MIRA 11:4)

(Perm Province--Grops and climate)

ZPBROV, Ye.F. Cond Goog Sci-(cias) "Igraelinatic denlitions of Permelogo Oblest and their examination in the equivalent production." Perm! (1959. 15 pp. (Lin of Higher Education USSR. Perm! State U in A.M. Gor'kiy), 165 copies (EL,45-58, 143)

"APPROVED FOR RELEASE: Thursday, September 26, 2002
APPROVED FOR RELEASE: Thursday, September 26, 2002
CIA-RDP86-00513R002065520019-1
CIA-RDP86-00513R002065520019-1

ZUBKOV, Ye.P.; KHRENOV, N.M., vetvrach; GORDIYENKO, N.A.

Vaccination of swine against cholera and erysipelas over a brief period of time. Veterinariia 36 no.11:18-18 N 59 (MIRA 13:3)

1. Direktor svinootkormochnogo khosyaystva g. Kherson (for Zubkov). 2. Direktor mezhsovkhoznov vetbaklaboratorii, g. Kherson (for Gordiyenko).

(Hog cholera) (Erysipeloid) (Vaccination) (Swine-Diseases and pests)

"APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065520019-1"

ZUBKOV, Yu., kand. 1skusstvovedeniya

Thentor and actor. Sov.shakht. 10 no.3:43-44 Mr '61.

(Theater)

"APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065520019-1 CIA-RDP86-00513R002065520019-1" CIA-RDP86-00513R00206520019-1" CIA-RDP86-00513R00206520019-1" CIA-RDP86-00513R00206520019-1" CIA-RDP86-00513R00206520019-1" CIA-RDP86-00513R00206520019-1" CIA-RDP86-00513R00206520019-1" CIA-RDP86-00513R002060019-1" CIA-RDP86-00513R002060019-1" CIA-RDP86-00513R002060019-1" CIA-RDP86-00513R002060001-1" CIA-RDP86-00518-1" CIA-RDP86-00518-1" CIA-RDP86-00518-1" CIA-RDP86-00518-1" CIA-RDP86-00518-1

Our fellow-soldier. Sov. voin 43 no.22:44 N *61. (MIRA 15:2) (Moscow--Theater)

8(0)

SOV/112-59-3-4278

Translation from: Referativnyy zhurnal. Elektrotekhnika, 1959, Nr 3, p 4 (USSR)

AUTHOR: Zubkov Yu. D.

TITLE: Development of Raw-Energy Sources in Kazakhstan After the Great October Socialist Revolution (Razvitiye energeticheskoy bazy Kazakhstana posle Velikoy Oktyabr'skoy sotsialisticheskoy revolyutsii)

PERIODICAL: Tr. Kazakhsk. s.-kh. in-ta, 1957, Nr 7, pp 137-141

ABSTRACT: Bibliographic entry.

Card 1/1

"APPROVED FOR RELEASE: Thursday, September 26, 2002 APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065520019-1"

ZUBKOV, Yu. D.

Induction Generators With Capacitor Excitation" (Asimkhronnye generatory s kondensatornym vozbuzhdeniyem), AS Kazakh SSR, 112 pp.

"APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065520019-1"

ZUBKOV, Yur.

Heroic emotions on the stage of army and navy theaters! Komma. Vooruzh, Sil 4 no.14:88-92 Jl '64. (MIRA 17:9)

"APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065520019-1 CIA-RDP86-00513R002065520019-1"

ZUBKOV, Yu.S., inzh.

Attachment to the PPSR-300-2 semiautomatic torch for underwater cutting. Svar.proizv. no.10:37-38 0 164. (MIRA 18:1)

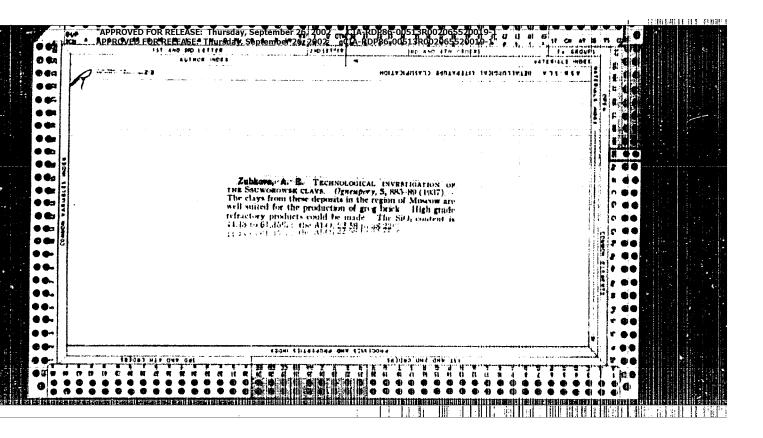
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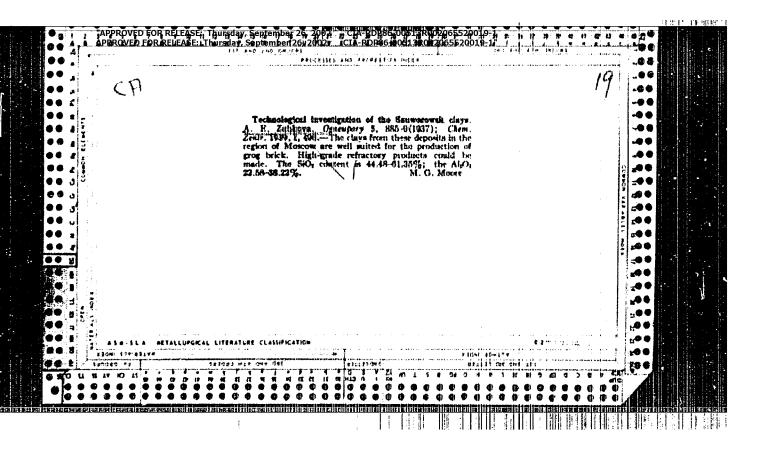
APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065520019-1" ZUBKOVA, A.I.

Periarticular autoblood injections for treating habitual dislocations of the soulder. Ortop., travm. i protes. 17 no.3:67 My-Je 156.

1. Iz Saratovskogo nauchno-issledovatel'skogo instituta vosstanovitel'noy khirurgii, travmatologii i ortopedii (dir. - dotsent Ya.N. Rodin)

(SHOULDER JOINT-DISLOCATION) (BLOOD-TRANSFUSION)





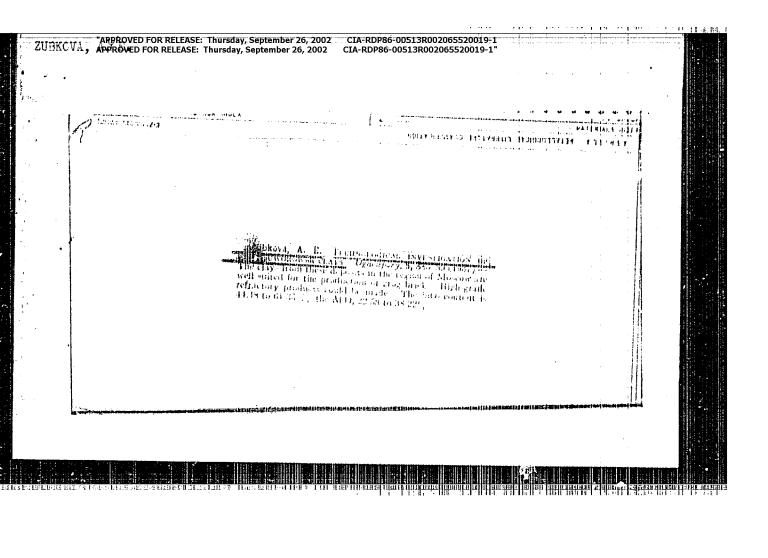
"APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065520019-1"

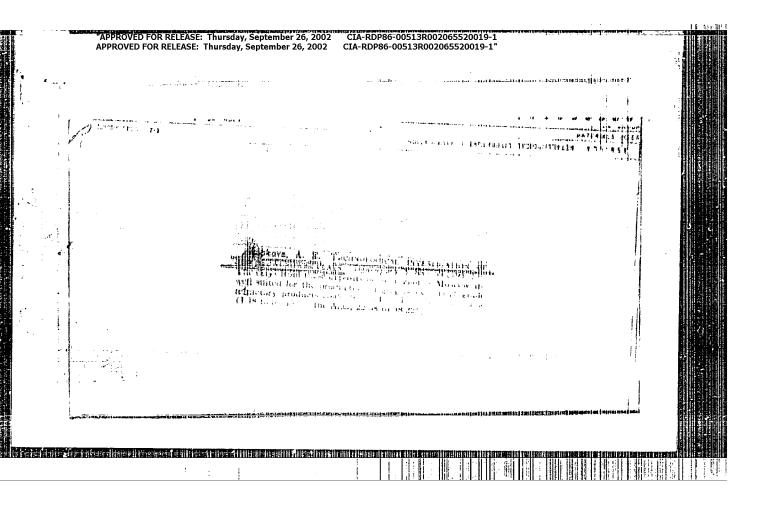
KARPENKO, V.V., kand.tekhn.nauk; KHATSINOV, E.I., kand.tekhn.nauk;

TVERSKOY, M.I. [Tvers'koi, M.I.], kand.tekhn.nauk; ZUHKOVA, A.S., inzh.

Grip for removing ensilage. Mekh. sel'. hosp. 9 no.9:20-21 S '58.

(Hoisting machinery) (Ensilage)





"APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065520019-1 APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065520019-1"	
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- 1. ZUBKOVÁ, D.
- 2. USSR (600)
- 4. Udmurt A.S.S.R. Amateur Art Activities
- 7. Artists of the Udmurt A.S.S.R. Klub, No. 12, 1952.

9. Monthly List of Russian Accessions, Library of Congress, May 1953. Unclassified.

- "APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065520019-1 CIA-RDP86-00513R002065520019-1"
- 2. USSR (600)
- A. Amateur Art Activities Rimert A.S.S.R.
- 7. Artists of the Udmurt A.S.S.R. Klub no. 12, 1952.

9. Monthly List of Russian Accessions, Library of Congress, May 1953, Uncl.

29169 ZUBKOVA, D. I ZAMYATIN. N.

K. Voprosu mezhporodnogo skreshchivaniya sviney v Belorussii. Izvestiya Akad-nauk BSSR, 1949, No. 4, s. 139_44

SO: Letopis' Zhurnal'nykh Statey, Vel. 39, 1949

"APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065520019-1"

ZUBKOVA, D.K.

On the verge; a popular scientific film. Zdorov'e 1 no.6:30 Je. '55.

(AICOHOLISM)

Swine Breeding

Raising pigs. Sots. zhiv. 14 no. 4, 1952

Monthly List of Russian Accessions, Library of Congress, July 1952. Unclassified.

"APPROVED FOR RELEASE: Thursday, September 26, 2002 APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065520019-1" ZUBKOVA, D. P.

Swine

Raising pigs on the Stalin Collective Farm. Sots.zhiv. 14, No. 9, 1952.

Monthly List of Russian Accessions, Library of Congress, December 1952. Unclassified.

21.00

- 1. <u>D. ZUBKOVA</u>.
- 2. USSH (600)
- 4. Adult Education
- 7. Plant agitation brigade. Klub no. 11. 1952

9. Monthly List of Russian Accessions, Library of Congress, April 1953, Uncl.

Art-Study And Teaching

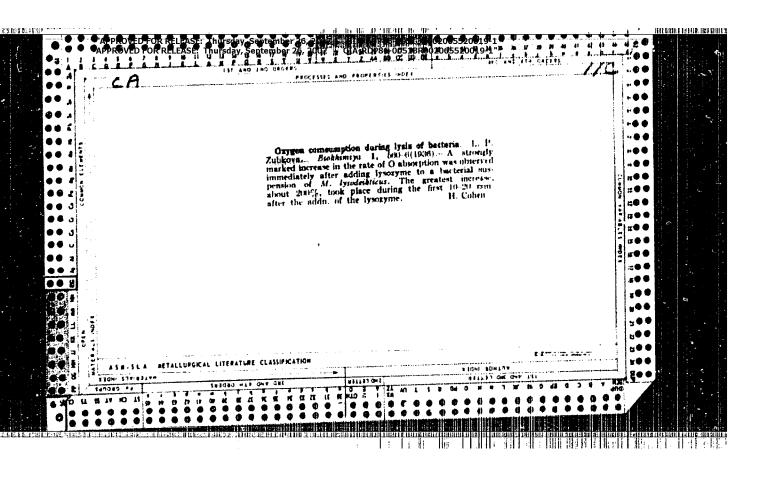
"Creative work of amateur artists" Klub, No. 4, 1952

Monthly List of Bussian Accessions, Library of Congress, August 1952. Unclassified

- 1. MEYERSON, G.S., ZVEREV, G.O., ZUBKOVA, F.M.
- 2. USSR (600)

Moscow Institute of Fine Chemical/Technology, "Study of the Solubility of Complex Tantalum Fluoride," Tavet. Met. 14, No 8, August 1939.

9. Report U-1506, 4 Oct 1951.



Zub KorA, G.A.

USSR/Cultivated Plants - Fodder.

: Ref Zhur - Biol., No 4, 1958, 15660 Abs Jour

G.A. Zubkova, A.V. Kalinova, Z.I. Kartashova, T.I. Author

Prikho'ko

Stavropol'skiy Agricultural Institute. Inst

: The Calcium and Phosphoraus Content in Perminial and Title

Annual Grass Hay During the Harvest. (Soderzhaniye kal'tsiya i fosfora v sene mnogoletnikh

i odnoletnikh trav po ukosam).

: Sb. nauchn.-issled. rabot stud. Stavropolisk. s.-kh. in-Orig Pub

t, 1956, vyp. 4, 86-88.

: The Stavropol'skiy Agricultural Institute studied the Abstract

Ca and P content upon harvesting of alfalfa, sainfoin, wither rye and rye-grass hay. The richest in Ca of the

М.

bean bearing grass hay were alfalfa (15.9-20.0 grams

Card 1/2

ZUBKOVA, K.A.

Cleaning of spinnerets by water under pressure. Khim.volok. no.4:65 '59. (MIRA 13:2)

1. Barnaul'skiy savod (Spinning machinery)

MALKINA, Kh.E.; KRASOTINA, A.N.; Prinimali uchastiye: ZUBKOVA, I.A.; RYZHKOVA, K.A.; SALOMASOVA, A.M.

Compounding formula, manufacture, and uses of carbon black-free lubricants for vulcanization molds. Kauch.1 rez. 20 no.7:30-33 Jl '61. (HIRA 14:6)

1. Nauchno-isolodovatel takiy institut shinner promyndhenmest. (Vulcanization-Equipment and supplies)

(Indrication and Indricate)

na it line and the findaments believed above refeared to the state "APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065520019-1 CIA-RDP86-00513R002065520019-1" ZUBKOVA, I.D. June - Harris Salar Barris Sala Scheme of drifts in the coastal zone over a flat sloping bottom as influenced by the direction and velocity of the wind. Trudy MMI 15:43-55 59. (MIRA 12:6)

ZUBKOVA, I.G.

Anatomical structure of the petiole in the family Vitaceae Juss.; its taxonomic and evolutionary significance. Bot.zhur. 50 no.11:1556-1567 N *65. (MIRA 19:1)

1. Botanicheskiy institut imeni V.L.Komarova AN SSSR, Leningrad. Submitted April 13, 1965.

EL! VARDANI, S.A. [El Wardani, S.A.]; ZUBKOVA, I.M. [translator]; YEZDROVA, V.I., referent

On the geochemistry of germanium (from "Geochimica et Cosmochimica Acta," 13, No.1). Biul.nauch.-tekh.inform.VIMS no.1:12-14 '60.

(MIRA 15:5)

1. Otdel nauchno-tekhnicheskoy informatsii Vsesoyuznogo nauchnoissledovatel'skogo instituta mineral'nogo syr'ya.

(Germanium)

OBREY, K.V. [Aubrey, K.V.]; ZUBKOVA, I.M. [translator]

Germanium in coal and in some of its by-products (from "Revue de l'Industrie Minerale," 40, special issue, July 1958). Biul.nauch.-tekh.inform.VIMS no.1:7-12 '60. (MIRA 15:5)

1. Otdel nauchno-tekhnicheskoy informatsii Vsesoyuznogo nauchno-issledovatel skogo instituta mineral nogo syr ya.

(Germanium)

ALEKSANIAN, M.S. [Alexanian, M.S.]; ZUBKOVA, I.M. [translator]

Determination of the germanium content in coals of the Aquitaine Basin (France) (from Revue de l'Industrie Minerale, 40, special issue, 1958). Biul.nauch.-tekh.inform.VI/B no.1:71-72 *60.

(MIRA 15:5)

1. Otdel nauchno-tekhnicheskiy informatsii Vseso, aznogo nauchnoissledovatel skogo instituta mineral nogo syr'ya. (Aquitaine Basin-Germanium) "APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065520019-1 APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065520019-1"

LAPITSKAYA, O.I.; ZUBKOVA, K.A.

Experience in acetylene production by high-temperature hydrocarbon pyrolysis. Nefteper. i neftekhim. no.1:34-39 '63. (MIRA 16:10)

1. Bashkirakiy mauchno-isaledovatel'skiy imatitut noftyanoy promyshlennosti i Ufimskiy khimicheskiy zavod.

ACCESSION NR. AT 3009262

8/2744/63/000/006/0186/0194

AUTHORS: Lapitskaya, O. I.; Zubkova, K. A.

TITLE: Experiment for obtaining acetylene by high-temperature pyrolysis in a tubular furnace.

SOURCE: Ufa. Bashkirskiy nauchno-issled. institut po pererabotke nefti. Trudy*, no. 6, 1963. Sernisty*ye nefti i produkty* ikh pererabotki, 186-194.

TOPIC TAGS: acetylene, acetylene production, butane pyrolysis, tubular furnace design, pyrolysis.

ABSTRACT: The optimum conditions were investigated for pyrolysing butane to acetylene in a tubular furnace in the installation shown in a figure. Modifications are suggested, such as the use of Kh25T (instead of lKh18N9T) nipples on the burners, and the addition of collector-type plates in the ocoling apparatus. Optimum raw material: water vapor ratio is 1 : 2.2-2.4, lower ratio causing coking. The dependence of coking on pyrolysis and on preheating temperatures is discussed. Orig. art. has: 3 figures and 3 tables.

ASSOCIATION: none

Card 1/2

"APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065520019-1"

LAFITSKAYA, O.I.; ZUBKOVA, K.A.

Preliminary data on obtaining acatylone by high-temperature pyrolicits in a tubestill. Trudy Bash NIINP no.51180-189 *62. (MIRA 17:10)